

National Marine Fisheries Service (NMFS) Determination for March 29, 2011:

Old and Middle River Flow Management [Action IV.2.3 (pages 648-652) of the NMFS Biological Opinion for the Long-Term Operations of the Central Valley Project and State Water Project (Opinion)]

Summary of Advice from the Delta Operations for Salmonids and Sturgeon (DOSS) group:

Background: DOSS confirmed the combined older juvenile Chinook salmon loss density at the fish facilities as provided in the following table. In the following chart, zeroes indicate days with no observed loss at the fish collection facilities under some level of pumping and dashes indicate days when no pumping took place and the fish collection facilities did not operate.

**SWP & CVP OLDER JUVENILE* CHINOOK LOSS & LOSS DENSITY
03/21/2011 through 03/27/2011**

Date	OLDER JUVENILE LOSS** (# fish)			Combined Older Juv Loss Density (fish/taf)
	SWP	CVP	Combined	
03/21/2011	0.00	11.52	11.52	0.84
03/22/2011	78.29	28.80	107.09	7.74
03/23/2011	8.59	14.40	22.99	3.35
03/24/2011	--	--	--	--
03/25/2011	--	--	--	--
03/26/2011	0.00	--	0.00	0.00
03/27/2011	26.81	--	26.81	3.05

DWR-DES 3/29/2011

Preliminary, subject to revision

*Older juveniles defined as all Chinook above the minimum winter run length (Delta Model)

**Loss data obtained from DFG, Stockton

The preliminary estimate of combined older juvenile loss density for Monday, 3/28/11, was 8.54 fish/TAF, based on a combined loss of 69.28 (69.28 fish at the SWP and 0 fish at the CVP) and combined exports of 8.109 TAF (6.916 TAF at the SWP and 1.193 TAF at the CVP). This is above the second stage trigger of the juvenile production estimate-based 1st OMR trigger (6.64 fish/TAF). All of the older juveniles were identified as winter-run, according to their length at date.

DOSS advice for Tuesday 3/29/11:

Because of very high flows at Vernalis and low demand, OMR flows have increased to positive levels in recent days. While Action IV.2.3 of the NMFS BiOp is still in effect, and DOSS will continue to track older juvenile loss density and provide advice to NMFS and WOMET, Action IV.2.3 is not currently constraining exports and is unlikely to constrain exports while flows at Vernalis remain high.

The preliminary loss density reported for Monday, 3/28/2011, was 8.54 fish/TAF, which exceeds the second state trigger level of 6.64 fish/TAF. DOSS advises NMFS and WOMET that CVP and SWP operations should continue¹ to operate to an OMR flow limit of no more negative than -2,500 cfs until 3 consecutive days of older juvenile loss density below either the first or second stage loss density triggers in the NMFS BiOp.

The OMR limit may be relaxed as early as Friday, 4/1/2011. If, for example, the loss densities for Tuesday (3/29), Wednesday (3/30) and Thursday (3/31; reported on Friday) are below 6.64 fish/TAF, the OMR limit may be relaxed to no more negative than -3,500 cfs. If the loss densities for Tuesday (3/29), Wednesday (3/30) and Thursday (3/31; reported on Friday) are below 3.32 fish/TAF, the OMR limit may be relaxed to no more negative than -5,000 cfs.

NMFS will notify DWR and Reclamation on Friday, 4/1, if the OMR limit may be relaxed based on loss densities for Tuesday-Thursday. Because, under current hydrologic conditions, the OMR limit in place under Action IV.2.3 (even at the most restrictive limit of -2,500 cfs) is not currently controlling export operations, and is also not expected to control exports throughout this weekend, NMFS will consult with DWR and Reclamation about whether or not tracking loss densities and the OMR limit will be necessary over the weekend.

NMFS Determination

NMFS accepts the advice from DOSS and determines that continuing to manage CVP/SWP operations to an OMR flow of no more negative than -2,500 cfs, in consideration of the preliminary combined older juvenile Chinook salmon fish density of 8.54 fish/TAF reported for 3/28/2011, is consistent with the intended implementation of Action IV.2.3 and sufficiently protective of listed species present in the Delta at this time. The 5-day running average OMR shall continue to be no more than 25% more negative than -2,500 cfs.

Three consecutive days in which the combined fish loss density is below an action trigger (and provided that the 5-day average OMR is no more negative 25% more negative than -2,500 cfs) are required before the OMR flow limit can be relaxed, as follows.

¹ The projects have been operating to an OMR limit of -2,500 cfs since March 14, 2011. The loss densities for March 24, 25, and 26 (and March 25, 26, and 27) provided three consecutive days below the first stage trigger level of 3.32 fish/TAF, which would have allowed a relaxation of the OMR limit to -5,000 cfs. However, NMFS, DWR and Reclamation did not discuss OMR management and recent loss densities until the DOSS call on March 29th, and no operational shift to a more relaxed OMR limit was implemented.

- If the combined fish loss density drops to below 6.64 fish/TAF, but above 3.32 fish/TAF, on 3/29, 3/30, and 3/31, the OMR flow limit may (as early as 4/1) be relaxed to no more negative than -3,500 cfs.
- If the combined fish loss density drops to below 3.32 fish/TAF on 3/29, 3/30, and 3/31, the OMR flow limit may (as early as 4/1) be relaxed to no more negative than -5,000 cfs.
- If the combined fish loss density exceeds 6.64 fish/TAF on 3/29, 3/30, or 3/31, the OMR flow limit of -2,500 cfs shall continue until there are 3 consecutive days of being below the second stage fish loss density trigger.